Lighting: High Efficacy Lighting In Hotel/Motel Guest Quarters

Description

This Standards change requires that permanent luminaires in hotel/motel guest rooms be high efficacy lighting. To accommodate the needs of special rooms such as luxury suites, an exception is provided for a maximum 10% of the guest room fixtures in the building, enabling them to be incandescent. This requirement would simplify the language in §130(b), as shown below.

> ***§130 (b)***
>
> *All luminaires in hotel/motel guest rooms shall employ high efficacy source(s).*
>
> *Exception: Up to 10% of the guest room fixtures in the building need not comply.*

Benefits

This requirement makes high efficacy lighting required for all permanently installed luminaires in hotel/motel guest room spaces. The requirement of §130(b) currently requires high efficacy lighting only in kitchen and baths, and this change would extend the requirement to all lighting. The requirement would achieve considerable energy savings.

Environmental Impact

This change will increase the amount of high efficacy lighting in hotel motel buildings, therefore saving energy, which would have environmental benefits in terms of reduced emissions at power plants and more electric system reliability

Type of Change

This change would be implemented as a mandatory measure.

Measure Availability and Cost

High efficacy lighting equipment suitable for use in hotel/motel guest rooms is readily available in the market from multiple manufacturers.

Useful Life, Persistence and Maintenance

The definition of high efficacy lighting includes a restriction on the use of medium-based incandescent lamp sockets. This eliminates the main risk that the energy savings would not persist. High efficacy lighting lasts longer than the incandescent lighting it replaces.

Performance Verification

Performance verification is not needed for high efficacy lighting.

Cost Effectiveness

High efficacy lighting is cost effective in almost all instances when compared to incandescent lighting. This will be demonstrated in subsequent project tasks. An approach similar to that described for kitchen, bath and utility room lighting will be used.

Analysis Tools

This recommendation would be implemented as a mandatory measure, and no analysis tools would be needed for demonstrating compliance. Simple “Energy = Power x Time” equations will be used for most of the analysis of cost effectiveness. The added benefit of reduced cooling load will be estimated using DOE-2 or other suitable energy simulation programs.

Relationship to Other Measures

This requirement relies on the common definition of “high efficacy lighting”. The requirement is similar to that for kitchens, baths and utility rooms.

Bibliography and Other Research

See the *Standards* change proposals for kitchens, baths and utility rooms.